

Joint Meeting of the
**Channel Islands National Marine Sanctuary
Research Activities Panel
and the
Channel Islands Marine Science Committee**

Thursday, January 19, 2006

Marine Science Institute,
University of California, Santa Barbara

DRAFT MEETING NOTES

RAP/CINMS members in attendance:

Mary Elaine Dunaway, MMS/MARINE
Jessie Alstatt, SBCK
Dave Siegel, UCSB
Donna Schroeder, UCSB, CIMS
Jack Engle, UCSB
Mary Bergen, CDFG
Tom McCormick, Channel Islands Marine Resource Institute
David Kushner, CINP
Greg Sanders, F&W but moved to MMS
Dan Richards, CINP
Bob Warner, UCSB
Christy Semmens, REEF, RAP
Melissa Neuman, NOAA/NMFS
Greg Helms, Ocean Conservancy
Ian Tanaguchi, CDFG
Pete Haaker, CDFG
Satie Airame, PISCO, MSI, UCSB
Kevin Lafferty, USGS
James Lindholm, Pfleger Institute of Environmental Research (PIER)
Gail Osherenko, MSI, UCSB
Hunter Lenihan - UCSB

Other Observers present:

Bernardo Bruitman, post-doc, NCEAS, UCSB
Carol Blanchette, PISCO, MSI, UCSB
Paul Petrich, Jr, CINCorp (Naturalist Corp)
Ron Velarde, City of San Diego, CIMSC
Christopher Voss, CAA Calif Abalone Assoc.
Mike Murray, CINMS
Dani Lipski, CINMS

Michael Smith, Gray Whales Count (note – wants to be added to RAP list and considered for membership)

Jim Marshall, CAA, Sea Urchin Fishery

Daryl Austin, CINMS intern

Stephanie Chan – UCSB student

Meeting highlights:

- **There is a large amount of research being conducted at the Islands, but funding for long-term projects (such as monitoring of reserves) appears to be in short supply.**
- **To complete the required State of the Sanctuary Report, RAP/CIMSC members will be contacted to help identify experts to be consulted on specific issues. Sanctuary staff will prepare the report based on input from experts, and then RAP will review and advise on the draft report.**
- **In consultation with RAP/CIMSC members via email and phone, Sanctuary staff will produce documents summarizing current monitoring activity in the CINMS. These documents will form the basis for judgment as to the adequacy and coverage of the present monitoring program.**
- **There was general consensus that the RAP and the CIMSC will stay as separate groups but possibly hold joint meetings from time to time.**

Detailed notes:

Introductions

Todd's introduction

Sanctuary announcements:

Chris Mobley is out of town and could not be here today although he would have liked to. CINMS had a 16% budget decrease in this fiscal year and the NMSP had a 30% budget cut. However, reserves and reserve monitoring are still a top priority; we will maintain full focus and support. There is a misperception right now that there is not monitoring going on and it is important to show the results and quantify the efficacy of reserves. It is our job to make sure the results are being communicated and the story is being told. It would be a tragedy to lose the reserves to a misconception that monitoring has not happened

Regarding the possibility of the RAP and CIMSC merging, I have no preference on that but consider that the RAP is part of the SAC and as such meetings need to be public (compliant with Federal Advisory Committee Act).

Regarding the Sanctuary Condition Report: It is a broad brush approach that has been determined is needed to be consistent at all Sanctuaries. It may be provided to political folks and the public as a research outreach tool.

The Research Coordinator position will be open soon.

Each member has an opportunity to introduce themselves, summarize research in the past year and describe planned efforts for 2006, including funding status.

Dan Richards, chair of Channel Islands Marine Science Committee starts off with some background on his group. This is the 59th meeting of CIMSC which usually meets quarterly but has become less frequent. The group is an informal, small meeting of people doing research at islands. Past discussions and efforts have been to formalize/standardize monitoring efforts, discuss abalone and efforts to recover white and black abalone. Offers that it might be a good idea to keep meetings of RAP and CINMS separate.

Dan continues with his research summary: Rocky intertidal monitoring conducted at 22 sites. Just hired a new research assistant. Continue to monitor black abalone and owl limpets in fixed photo plots. Limpets have been declining but seem to be stabilizing. Although they are fairly low in some plots, they are higher in others. Have seen individuals over 100mm at Santa Rosa Islands and have seen recruitment at sites that had low recruitment before. Black abalone abundance has been down but appears stabilized, and no withering syndrome has been seen. Have seen just a few individual black abalone but those seen had high biomass (over 170mm). Possibility that they have been released from competition? However, no juveniles were seen.

Greg Sanders – Formerly of Fish and Wildlife and now with MMS. At F&W worked on the southern sea otter recovery project where otters were translocated to San Nicholas Island. They were not successful establishing otters at San Nicholas and now they are evaluating the program. A comment period ends March 6th. The proposed action is to abandon translocation, allow otters to move where they will. There is a prediction that otters will expand to SB along coast and reach carrying capacity in 10 years. Researchers monitoring sites should look for otters. Concern about how sea otter recovery will affect abalone was discussed.

Dave Kushner – National Park Service Kelp Forest Monitoring – a long term data set on ecologically based monitoring. Currently have 32 monitoring sites but after 2007 program will discontinue unless more money becomes available. Funding has dwindled and program is now solely on soft money. Concerns about monitoring continuation expressed.

Tom McCormick – Channel Islands Marine Resource Institute, white abalone project. Collection began by Fish and Game in 2000, first spawn at UCSB. Now have 5 families with several thousands of individuals. There is a research need for basic life history knowledge and basic research on abalone hatchery techniques. Experiments have been done with low temperatures, food preferences and behavior. Plan to place animals in wild next year; currently animals are 60 mm and they need to be 100mm to place in field. Recruitment devices are currently out in field. Spent four days checking sites for abalone and on the last trip, found 1 abalone.

Mary Bergen – California Department of Fish and Game, reserves monitoring. Last year one-time money from the state was used to monitor from Monterey to San Diego (including Channel Islands) using the CRANE protocol. Consulting firm Tenera has been contracted for data analysis and the data should be available to PIs soon. Eventually the data will be on website for public. In 2005, CDFG also helped PISCO by providing divers for reserves monitoring. However, budget for 2006 remains unclear. Plan to continue with ROV surveys and to develop protocols to compare data to submersible surveys. In 2004, surveyed with ROV at 4 sites and in 2005 at 10 sites (5 in reserves, 5 outside). In 2006, hope to do 10 sites again. Acknowledge support of Sanctuary for use of RV Shearwater.

Jack Engle – UCSB, subtidal and intertidal monitoring. Hands out an overall summary of 2005 work at Channel Islands. Monitoring work, including long-term work at permanent transects is supported by a private foundation and has been ongoing for many years. Overall trends: seeing a recovery of kelp after the warming cycle (kelp appears almost as good as it was in the 1970s at some islands), however, urchin dominated sites still exist at some islands. Water temperatures have been up and down and there has been storm activity causing fluctuations in kelp. However, they do see recovering urchin barrens and also see brittle star dominated sites. See improvements in kelp forest health moving from the west to east along the islands with urchin dominated sites at intermediate islands. Also work at Santa Catalina Islands where they monitor the invasive Japanese kelp *Undaria*. This is the only population at islands but they have seen it spread 1 mile. The population tends to peak in the spring. It was first discovered on soft bottom habitat deep water and has since spread to shallow rocky habitat. *Undaria* requires protected waters and other areas have not been extensively searched. Engle advises everyone to watch for it in protected waters as it is only a matter of time before it spreads.

Discussion of seastar disease: Saw the first outbreak in 1978 and have seen it off and on since then. It appears to be associated with warmer waters but it has not received adequate research. First populations affected were at Catalina and these populations have still not fully recovered. Intertidal sites near Scripps have recovered and populations at northern islands have seen some recovery. Affects *Pisaster ochraceus* and may affect other echinoderms.

They have been documenting records of new species since the El Nino such as treefish, pearl oysters, others (?) and these may now be part of ecosystem.

Monitoring eelgrass populations: see new areas close to existing beds indicating bed is spreading. Once a year monitor transplanted site at Frenchy's cove and have found 15 patches further east from Frenchy's (the original site was lost to urchins). Always on the lookout for abalone when monitoring but do not see often. Red abalone is common at San Miguel in dense kelp but concern that harvest would eliminate all legal sized individuals.

There is a biotechnology company in late stage testing for development of a cancer vaccine using blood hemolymph from the giant keyhole limpet, *Megathura*. Very concerned about the emerging fishery that may develop as a result of this demand for this resource. Suggests that it would better to examine and regulate such a fishery early on rather than wait for fishery to decimate populations. Natural history information on

keyhole limpets is non-existent and suggests that any information would be useful. John Ugoretz (on conference call) comments that keyhole limpet fishery concern has been raised to Fish and Game commission. Department of F&G will watch the emerging fishery closely. Although it is not an issue now it has the potential to become an issue if the pharmaceutical product is approved. F&G has closely watched landings which currently match what the biotech companies are using and these landings are generally coming in southern California sites under a scientific collecting permit. Jim Marshall, local fisherman present, is not aware of people collecting.

Rocky intertidal (hands out summary sheet): Network has total of 80 sites. Includes surveys at islands by CIMP and goes back to the 1980s for some sites while other sites added more recently. Most sites were sampled last year but face funding problems. Eleven sites were unfunded for 2006 and will be dropped. At Catalina, 2 sites were unfunded. There is a protocol handbook for core monitoring, and data exist in an Access database. Much of these data are accessible including description of many sites, numbers, and who is monitoring which sites and for how long. Received a grant from CA DFG for quick response to oil spill. Developing a photo database which will eventually be available on line.

Donna Schroeder – UCSB – Studies effects that oil platforms have on fish populations, particularly rockfish. Survey for recruit of rockfish at Anacapa and Santa Cruz Islands. Conducted CRANE surveys in 2004 and continued fish monitoring using CRANE methods at Santa Rosa Islands (Johnson's Lee, Cluster Point) in 2005.

In 2005, worked with F&G to calibrate ROV surveys in deeper water by doing surveys using the submersible Delta and are now almost finished analyzing videos. Purpose is not whether one method, ROV or Delta surveys, is better than the other but rather each method reinforces the other and allows coverage of a larger area for deep water monitoring. Documents will be made public when complete. Received 20k for that pilot project and will need much, much more to do bigger project. Delta surveys were also done at the Footprint (proposed MPA site). As a side note, we are seeing giant kelp in all sorts of areas that you would not expect it and seeing shifts in its range. This species provides a good link between shallow and deep species. Have been using habitat maps developed by many others to ground truth them. Also involved with the Sanctuary Foundation's Collaborative Marine Research Program. CMRP was designed for stakeholders to be involved with research in the Sanctuary; have been focused lately on marine reserves. Funded 4 projects recently: 1) Recruitment surveys of urchins and other large invertebrates; 2) David Bacon with Carrie Culver to engage anglers in a kelp bass tagging study at Gull Island area; 3) Outreach project to survey scientists on their interests in working with fishermen; 4) Outreach program at Goleta Pier regarding fishing practices (catch and release) and MPAs.

Mary Bergen on ROV survey funding: future is uncertain; there is a pending NFWF grant.

Donna on MSI Delta survey funding: should be OK because of oil industry and low rockfish populations, perhaps for the next few years OK.

Dave Siegel – UCSB Plumes and Blooms Project, running since 1996. This projects attempts to get a picture of regional water quality. In the past, took samples every 3 weeks but now down to 10 days/year on the Shearwater due to increased demand for vessel time by research community. Funding is secure from NASA into 2007. Linked closely to Santa Barbara LTER project. Ocean color datasets - working at a km scale and it changes every few days. Secondly, a center has been set up at UCSB to allow for use of “SPOT”, a high resolution French satellite providing images. These satellites provide images of kelp coverage of the four northern Channel Islands. Mary Bergen asked if this could be shared with DFG, but Dave is not sure because of the French company’s proprietary interests. Dave leads a biocomplexity project focused on looking at how uncertainty (physical, biological, etc.) influences how fishermen behave. Currently in year 2 of 5; NSF funded. Idea is to look at management options.

Jessie Altstatt – Santa Barbara Channel Keepers. Eelgrass transplant area at Frenchy’s Cove is doing well over past few years and starting to spread. Found a new patch a few hundreds yards from their site. SBCK has also worked on a small transplant site at Scorpion, and at Prisoner’s Cove.

Mary Elaine Dunaway - Minerals Management Service (MMS). Looks like all of the region’s monitoring projects will remain funded for now, but the research budget is hurting because of costs associated with the opening of a new Gulf Coast MMS office. MMS funds MARINE sites -- 24 this year. Don’t really have funding for seven sites this year, but are still looking. Want to produce a State of the Rocky Intertidal report, starting with the SB Channel. MMS has been working to do multi-beam mapping in the eastern SB channel with USGS. They are scanning southern California Bight coastline slides into digital files from 1979-80. Working with Pflieger Institute to transplant a small number of V-tagged rockfish (vermillion, green spotted) from platforms into reserves, to see if they stay. Ann Bull at MMS, and Chris Lowe are the MMS contacts and are working with the Sanctuary on this too. New program coming on line includes a new grant program for coastal work; intent is that it be research-based and monitoring (a murmur through the crowd) but no further details yet. Also an alternate energy research grant program will come on line (e.g., wind, wave, etc.).

Ron Velarde - City of San Diego. Monitors sewage outfall off the city. A few years ago this type of monitoring expanded to all of Southern California bight. 1994 was the first year for this project with sampling from Pt. Conception to Mexican border in depths of 10 to 200 m. Project looked at benthic infauna. In 1998, for the Bight 98 project, the Channel Islands were added. Survey was dropped back to 10-120m range. In 2003 there was Bight03, which also included Channel Islands, and also looked at even deeper waters. Data analysis continues. 1998 report is available. Looking ahead there is talk about including rocky intertidal and sandy beach areas. Want to do a more expanded survey, will need more cooperation. Dan Richards commented that near shore/intertidal surveys would be important for understanding water quality.

Hunter Lenihan – UCSB, Ecologist with the Bren School. Hunter is working on a collaborative research program centered on the spiny lobster fishery. This would be a

monitoring program for inside and outside Channel Islands reserves, with tagging. Program will look at socioeconomic factors of reserves, such as how the reserves can improve fishery management and will look at development of quantitative adaptive management model. Fishing industry interested in using reserves as part of a larger regional fishery management approach. Received a grant for almost \$500,000 for this collaborative interdisciplinary program.

James Lindholm – Pflieger Institute of Environmental Research (PIER) - acoustic telemetry. 102 sites from Pt. Conception to Catalina focused on northern Channel Islands. Black sea bass tagged since 2001, white sea bass tagged since 2003, and kelp bass and CA sheephead tagged since 2004. Array is designed to track movement across reserve boundaries at Anacapa. The acoustic array is funded primarily by the George T. Pflieger Foundation, with some support from the NMSP in 2004 and 2005, and is available for others to use. Future funding is not guaranteed. Existing acoustic tags will transmit to 2008. PIER working with sanctuary and will publish data. Project examines how vagility varies across species range and movement in and out of reserves. Preliminary results show spill into, but not out of, reserve for sheephead at Anacapa. James loses lots of expensive equipment (about \$2k each) so if you see any gear floating around marked “PIER,” call James! PIER is considering upgrading the array at Anacapa to a cabled system. There has been a cabled array proposed by UCSB which would allow data to transmit real time.

Kevin Lafferty - USGS – Starting project on Black abalone which asks 2 questions: 1. Are the abalone that are still out there resistant to withering disease? Will expose individuals to disease and track status. 2. Test ideas of spawning.

Satie Airame – UCSB/PISCO - Acknowledges value of discussion of monitoring activities from marine policy perspective and defers discussion of PISCO activities to Carol Blanchette.

Carol Blanchette – UCSB/PISCO - linking bio/eco/ocean patterns to larval dispersal. Have deployed oceanographic moorings: ADCP moorings measure 3-D movement of water and CODAR arrays measure surface currents. Taking CODAR technician out next week to set up CODAR site at islands. First time surface currents will be mapped out islands. Collaborate with subtidal research at CINP and others with rocky intertidal monitoring. Monitor rocky intertidal sites at all park sites at islands, repeating on semi-annual basis. Also monitor larval settlement at islands and recently published two papers: one in Limnology and Oceanography and one in Marine Biology. Studies link recruit and adult abundance. Data sets have been compiled into an ecological metadata database which will be available on the web soon.

Christy Semmens - REEF - citizen science monitoring program. Standardized method for volunteer divers to count fish. There are over 90K surveys in database, which is available online. West coast data are increasing (about 5k surveys) at sites in CINMS, MBNMS and others. Surveys are conducted on an individual basis and at REEF events. A few years ago organized an effort for surveys inside and outside reserves. Previously

only focused on fish but now expanding to inverts (primarily in the Northwest but hope to expand). Working with state to identify inverts to monitor here. Funding: organization is a non-profit and most costs are borne by volunteers although some funding received through grants. Bob Warner - any effort to standardize methods to compare with other programs? Christy - only in Caribbean.

Melissa Neuman - NOAA/NMFS - white abalone is the only abalone species listed under ESA. Recovery plan is being circulated for technical review with hopes to go public by end of year. Pink, green, black and pinto abalone are on “Species of Concern” list. Purpose of listing is to put funding into research of these species; to be proactive in their management. There is a new grant program: proactive species of concern grant program. NMFS will select 2 complexes of species and provide \$250k over 2 years for each species (another low murmur through the crowd).

For white abalone NMFS has –plans to protect surviving populations and habitat. Starting in 2002, John Butler in La Jolla collected at southern locations. In 3-4 days identified 200 individuals. Multi beam sonar identified greater areas of abalone habitat than previously measured. NMFS wants to expand habitat surveys to Channel Islands. Also want to identify spots for out-planting with preference for out-planting in reserves for protection of the species.

Pete Haaker - CDFG - Continuing to look at green and pink abalone at Catalina and seeing good signs of recovery. Deployed ARMS (recruitment collection devices) and collaborating with grad student at Scripps. Recovery management plan was accepted by F&G commission in December and plans are available on web. Opening of abalone fishery is not a given; much research needs to be done and a stock assessment is needed. Fishers want to be involved and CDFG is working with fishers to monitor populations.

Ian Tanaguchi - CDFG - Commission has asked them to work with fishers. CDFG has Identified tasks for process: 1 - need EIR, 2 – need assessment protocols, 3 – need to establish funding mechanisms, 4 - need decision on what process to use for fishery.

Chris Voss - fisherman in Santa Barbara. Fished abalone for 8 years before fishery closure. Wants to establish stock assessment, use models, distribute total allowable catch among constituents. Intend to implement management plan, including a plan to divide island into 3 areas, use an ITQ program. Possibility of using this program for keyhole limpets. Press release was recently issued. Issues about ITQs and about the sequence of process are raised. First need stock assessment. Regulatory documents are still needed. Jim Marshall – Fishermen’s abalone association still has about \$200K that was collected when fishery was operating. These funds could be used for the initial surveys that need to be done.

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Sanctuary Condition Report

Sarah Fangman joins from Gray’s Reef, Kathy Dalton and Steve Gittings join from NMSP HQ to introduce the Condition Report and request advisory help from the RAP.

Sarah Fangman: Referring to the Stellwagen Bank NMS draft condition report. Each of the Sanctuaries will have to tackle the 17 questions listed on page 2. This is a requirement we have to report back to Congress and the public as an executive summary. We know that because of uncertainties this will be difficult. Steve Gittings reiterated that this is just an executive summary, and in no way meant to supplant the actual monitoring reports that exist. Bob Warner asked who this report is for, and how is any kind of uncertainty communicated to the reader/decision maker. Sarah and Kathy pointed out some places in the tables and the text where the basis for conclusions can be explained. Steve Gittings clarified that this is not a report that at a site-level the Manager would use for taking action. Congress will use this to help understand how the whole national system of Sanctuaries is doing.

Kathy explained that at Stellwagen the staff first took on each of the questions themselves, then sent it out for review. At Cordell Bank NMS they are meeting one-on-one with local experts (that are on their Sanctuary Advisory Council) and have had some work group meetings on this. Gittings acknowledged that expert input is needed, but there are many ways to go about it. Bob Warner suggests that emails could be used to identify experts to be consulted, then have staff prepare the report based on checking with those experts, and then bring the report to the RAP for review.

Dave Siegel asked why the condition report questions only talk about the state of resources and don't talk about their use/utilization and socioeconomic values. Gittings said that this was a source of much discussion when the report format was developed. Decision to not include socio-economic aspects was made because of the various kinds of results, the extent to which many of the findings might be unrelated to the state of the resources.

Kevin Lafferty mentioned that a series of independent opinions/guesses might provide a more accurate picture than if a group gets together and tries to work by consensus.

Mary Bergen suggested that an "unknown" or "lack of information" category might be needed.

Carol Blanchette suggested that a baseline and time scale component would be important for the summary table. Gittings said that the intent is to generate these either every 5 years or to coincide with the development of revised management plans, which is also supposed to be every 5 years. Because this is the first time around, each site has the flexibility to use whatever time frame is best for estimating trends. As for baselines, this report is not meant present itself as a new baseline for the site. Don't want it to become the baseline for future monitoring and evaluation.

James Lindholm: What would you do if 50 fish species were crashing and 50 were doing well, what would a consolidated symbol look like? Gittings: that is difficult but managers have to estimate.

Consensus that RAP members will be emailed to help identify experts to be consulted, then Sanctuary staff will prepare the report based on input from experts, and then RAP will review and advise on the draft report.

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Future meeting announcements:

Pete Haaker on abalone again. In Monterey March 26-31 the National Shellfish Association will meet. A symposium on abalone will be held.

Dan Richards: Society for Conservation Biology will meet in June in San Jose. California and the World Ocean will meet in September.

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Reserves Monitoring Meeting and Report:

Dani Lipski - CINMS - discusses possibility of a monitoring planning meeting for 2006 to discuss funding, gaps in monitoring, plans, data sharing, etc. Mary Bergen not sure a meeting is needed, you've heard from us. Dave Kushner agrees; he's working on a summary table.

Satie - Feels it is important to communicate what we do know and what has been done, as well as where there are gaps. The monitoring that is occurring does address much of what the Fish and Game Commission is looking for. Suggest a table based on what questions we can answer, and one on what we can't yet answer. Agrees that a table can be filled out via email distribution.

Mary Bergen says a sheet could easily be produced that summarizes what's been done and what is happening. Satie recommends that the questions of interest to the Commission, which are in the DFG MPA Monitoring Plan on line, be used as the framework for the reporting on this.

Consensus that Satie and Dani can work together to produce summary documents and will consult RAP members via email and phone.

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Should RAP combine with the CIMSC?

Dan Richards feels that they should remain separate. Cross-updates like this are valuable, though. Perhaps some of the updates could be summarized in advance via email. The CINMS is not a set group, so others are invited, even if only occasionally to report something. Because the CIMSC is not an advisory body, the meetings don't have to be public.

Jack Engle: Important that the CIMSC focuses on all the Channel Islands. For people that are on both groups and traveling a long distance, maybe hold both group meeting on the same day back-to-back. And maybe updates could be provided less frequently by members.

Consensus that groups will stay separate but possibly hold joint meetings from time to time.

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New Fish and Game Regulations on Invertebrates:

Tidal Invertebrates Act: Dan commented that six more species groups were added for allowable sport harvest, including owl limpets and wavy top snails. The current limits are now 35 a day. Concerned about the harvest impacts, such as possible changes in community structure. In the spring proposals could be made to ask Fish and Game to take these off the list. Jack Engle thinks this could have been a mistake, and is important to be corrected. Ian said that the invertebrate team at DFG looks at issues like this, and revisions could be made next year. They will need to hear arguments on this. Mary suggested letters to the Fish and Game Commission are OK. Jack feels that this should be about correcting an oversight, which should be a straight-forward technical correction.